

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (currently amended) A tunable imaging sensor, comprising:

a housing;

a lens plate attached to a front of said housing;

a filter plate inside said housing adjacent said lens plate;

a camera plate inside said housing adjacent said filter plate;

a plurality of imagers mounted on said camera plate;

a plurality of lenses mounted on said lens plate;

a plurality of filters mounted on said filter plate;

wherein said lens plate, said filter plate, and said camera plate being aligned such that radiation passing through ~~one~~ each of said lenses passes through a respective, optically aligned one of said plurality of filters onto a respective, optically aligned one of said imagers; and

wherein each of said plurality of filters that optically align with said respective ones of said imagers is user-selectively changeable.

2. (original) A sensor according to claim 1, wherein said plurality of imagers consists of four imagers, said plurality of lenses consists of four lenses, and said plurality of filters consists of four filters.

3. (original) A sensor according to claim 2, wherein at least two of said four filters are each sensitive to a different wavelength of radiation.

4. (original) A sensor according to claim 2, wherein at least two of said four filters are each sensitive to a different form of radiation.

5. (original) A sensor according to claim 2, wherein said plurality of imagers are CMOS imagers.

6. (original) A sensor according to claim 1, wherein said filter plate is rotatable such that rotating said filter plate brings a different one of said plurality of filters into alignment with one of said lenses and one of said imagers.

7. (original) A sensor according to claim 6, wherein said plurality of imagers consists of four imagers, said plurality of lenses consists of four lenses, and said plurality of filters consists of sixteen filters.

8. (original) A sensor according to claim 7, wherein rotating said filter plate brings a different group of four filters into alignment with said plurality of lenses and said plurality of imagers.

9. (original) A sensor according to claim 8, wherein said filter plate is connected to a shaft of a stepper motor.

10. (currently amended) A tunable imaging sensor system, comprising:
a housing;
first means for mounting a plurality of lenses in said housing;
second means for mounting a plurality of filters adjacent said plurality of lenses in said housing;
third means for mounting a plurality of imagers adjacent said plurality of filters in said housing;
wherein said first means, said second means, and said third means are aligned such that radiation passing through ~~one~~ each of said lenses passes through a respective, optically aligned one of said plurality of filters onto a respective, optically aligned one of said imagers;
and
wherein each of said plurality of filters that optically align with said respective one of said imagers is user-selectively changeable.

11. (original) A system according to claim 10, further comprising:
a computer including a frame grabber which receives a plurality of outputs from said plurality of imagers; and
a synchronization and communications circuit connecting a communications adapter in said computer to said plurality of imagers.

12. (original) A system according to claim 11, in which said computer includes means for processing said plurality of outputs from said plurality of imagers.

13. (original) A system according to claim 12, wherein said plurality of imagers consists of four imagers, said plurality of lenses consists of four lenses, and said plurality of filters consists of sixteen filters.

14. (original) A system according to claim 13, wherein rotating said second means brings a different group of four filters into alignment with said plurality of lenses and said plurality of imagers.

15. (original) A system according to claim 14, wherein said second means is connected to a shaft of a stepper motor, and said stepper motor is controlled by said computer.